

Shared Storage for Mission Critical Media Production

Avoid interruptions to mission critical media production workflows using Ardis' high availability dual file system controller and Seagate's high performance SAN storage.

Solution Summary

The Ardis Technologies Dual HA AVFSHead containing two Ardis Virtual File System (AVFS) controllers—together with the Seagate® Exos® X 2U24 high-performance all-flash array—offers a superior storage solution providing high availability using redundant and hot-swappable active-active SAN controllers, drives, power supplies, and fans—enabling automatic transparent failover and multi-path support to ensure that storage access is uninterrupted. Seagate's ADAPT data protection protects media and enables fast drive rebuilds, while the Exos X SAN controllers support FC and iSCSI SAN interfaces—and can be configured to support both simultaneously—enabling flexible deployment options.

Benefits Summary

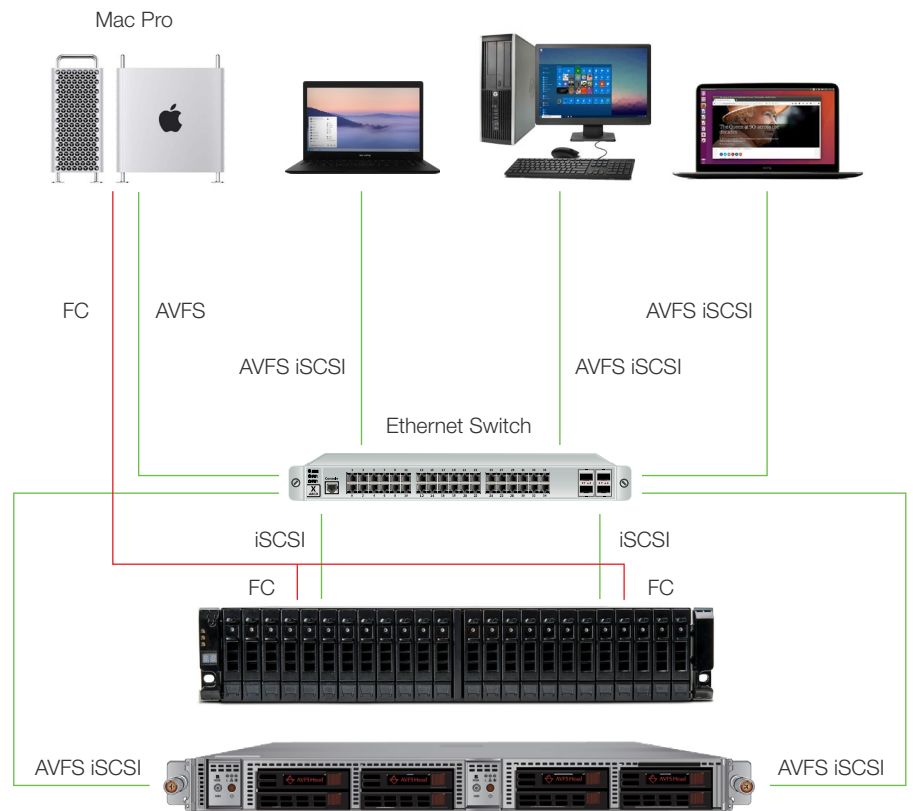
- High availability
- Scalability
- Flexible SAN infrastructure
- Lower Total Cost of Ownership

This solution addresses mission critical media workflows requiring uninterrupted access to shared storage using iSCSI, Fibre Channel (FC), or both host interface protocols simultaneously.

Rich media and entertainment production houses rely on on-premise SAN storage systems for speed, high-capacity storage, scalability, and ease of access. Rich media transfer is affected by users accessing the data simultaneously, as reading and writing to the same media files is a common practice in production houses.

The Challenge

Today's production houses use FC as the predominant SAN protocol for media data access. The Ethernet SAN protocol iSCSI is becoming more popular due to the ease of access and lowered costs. Customers who want to switch over to Ethernet will require a solution that allows for connectivity with both protocols. The added benefit of a solution compatible with both connections is redundancy.



Solution Approach

To minimize downtime, SAN storage systems must be redundant and offer transparent failover for users while they are reading and writing to these files—without impacting performance. Redundancy is enabled through RAID and erasure coding for data protection and parallel data access with multiple connections.

The Seagate Exos X 2U24 and Ardis Dual HA AVFSHead is a solution that allows users to access the same content using both FC and/or iSCSI protocols at the same time. Data failover is truly transparent because the storage arrays are connected directly to desktops using multichannel connections in parallel. AVFS (metadata) failover is transparent for reading and writing. When an AVFS head failover occurs, the standby AVFS head takes over.



The Seagate Solution

Seagate's Exos X 2U24 provides the media and entertainment industry with a high-performance, high-capacity all-flash array or hybrid array solution which is preferred when always-on, critical workload access is required. Redundancy for when a failover occurs is also established with the ability for Exos X 2U24 to connect active-active with the Dual HA AVFSHead being active-passive, allowing for a full transparent failover where connections are maintained.

The Exos X 2U24 configured with an all-flash array is also competitively priced to lower the overall TCO while maintaining the same high-performance required for production houses. The included ADAPT technology is an additional advantage where data is protected from drive failure, especially in rich media environments where profits are dependent on content production.

Partner Solution

The Ardis Dual HA AVFSHead is Ardis' most reliable file system controller combining two file system controllers operating in an active-passive configuration, enabling transparent failover if a fault occurs. The AVFS is a scale-out single file system that is optimized for media applications such as edit, ingest, playout, and rendering. Key features of AVFS include a transparent addition of new capacity, hierarchical storage management, and file-based SSD caching.

The Dual HA AVFSHead manages the Exos X 2U24 with active-active dual controllers. AVFS as a scale-out single file system can control several of these all-flash arrays, or combinations of all-flash and disk storage arrays, such as Seagate's Exos X 5U84 SAN array and the Exos E 5U84 JBOD expansion array. When a combination of Seagate's Exos X 2U24 and Exos E 5U84 are installed, the Exos X 2U24 can also be used for file-based caching.

Total Solution

This combined solution solves storage challenges in the following ways.

Reduced Downtime

The Ardis Dual HA AVFSHead provides two redundant AVFS controllers in a single 1U chassis. The Seagate Exos X SAN array has controllers, power supplies, fans, and drives that are redundant and hot-swappable for high availability. The Seagate Exos X also integrates Seagate's ASIC-based ADAPT data protection enabling data protection and fast rebuilds using erasure coding.

Increased Performance

Rich data/media content is often accessed by multiple users simultaneously. Dual connections allow for failsafe transfer rates, and all flash array or hybrid systems allow for tiering data to flash and disk media enabling high performance and cost effective storage.

Lower Costs

Capacity and performance in a modern media and entertainment production house is more important today due to the size of content. As a vertically integrated manufacturer, Seagate systems are competitively priced and moving to an Ethernet-based iSCSI connection without interruption to legacy FC connections, and upgrading on-premise infrastructure ensures business continuity.



Benefits of the Dual HA AVFSHead and Seagate Exos X 2U24 solution include:

Features	Benefits
High availability	Critical media workflows are protected against interruption by the redundant file system controller and the Seagate Exos X redundant hot-swap subsystems.
Scalability	File systems with a single namespace and directory structure allow for additional storage to be added without any user interruption.
Flexible SAN infrastructure	Choose from an all-flash or hybrid array that supports simultaneous access via Ethernet-based iSCSI and FC protocols, with seamless upgrade for legacy media and production houses.
Lowered Total Cost of Ownership	Sustained, reliable performance with tiered implementation using a combination of HDD for low-cost capacity and SSD for flash performance.
Data protection	ADAPT technology helps prevents loss of data and data access continuity.

Conclusion

The Seagate Exos X 2U24 all-flash array and Ardis Dual HA AVFSHead is the superior choice to minimize mission critical downtime for media and entertainment productions. Continuous workflow is established with the highest performance file access achieved through Seagate Exos X 2U24 all-flash array, or applying a tiered implementation with the Ardis Dual HA AVFSHead using a combination of HDD and SSD for sustained performance.

The combined solution provides customers with high availability through hardware redundancy with automatic failover while minimizing costs for a seamless and flexible upgrade to their on-premise storage infrastructure. The flexibility and scalability in this combined infrastructure are truly endless.



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For more information on the Seagate Exos X 2U24, see:

www.seagate.com/products/storage/data-storage-systems/raid

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